IN THE CLAIMS

1. (previously presented) A computer method, comprising executing at least the following operations in at least one data processing device:

* using a pre-established DTD corresponding to desired XML; and

* based on the DTD and a plurality of data sources, adding annotations to the DTD to create an annotated DTD, such that an XML document generated from the annotated DTD is guaranteed to conform to the DTD .

2. (original) At least one medium readable by a data processing device and embodying at least one result of the method of claim 1.

3. (previously presented) A data processing device comprising:

-       the at least one medium according to claim 2, and

-       at least one processor configured to use the at least one medium to produce the XML document based on the annotated DTD.

4 -6 (canceled)

7. (previously presented) The method of claim 1, wherein at least one of the data sources is a relational database.

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8. (original) At least one medium readable by a data processing device and embodying at least

   one result of the method of claim 7.

9. (previously presented) A data processing device comprising

-       the at least one medium according to claim 8; and

-       at least one processor configured to use the at least one medium to produce the XML

        document based on the annotated DTD.

10-12. (withdrawn)

13-15 (canceled).

16 - 21 (withdrawn)

22. (previously presented) The method of claim 1, further comprising executing the following

operation in the data processing device: associating values and or formulas with the DTD.   ·

23. (original) At least one medium readable by a data processing device and embodying at least

   one result of the method of claim 22.

24. (previously presented) A data processing device comprising:

-       the at least one medium according to claim 23; and

-       at least one processor configured to

        -       use the at least one medium to produce the XML document based on the

                annotated DTD ; and

                                                                                        3

- perform the associating operation.

25. (original) The method of claim 22, wherein the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct having a repetition symbol at the end.

26. (original) At least one medium readable by a data processing device and embodying at least one result of the method of claim 25.

27. (previously presented) A data processing device comprising:
- at least one medium according to claim 26; and
- at least one processor configured to
    - use the at least one medium to produce the XML document; and
    - perform the associating operation.

28. (original) The method of claim 22, wherein the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct which is not a #PCDATA, a choice list, or an attribute list, and does not end with a repetition symbol.

29. (original) At least one medium readable by a data processing device and embodying at least one result of the method of claim 28.

30. (previously presented) A data processing device comprising:

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- the at least one medium according to claim 29; and

- at least one processor configured to

    - use the at least one medium to produce the XML document based on the

      annotated DTD; and

    - perform the associating operation.

31. (original) The method of claim 22, wherein associating includes associating a value or

formula producing a value with each PCDATA, choice list, or attribute definition.

32. (original) At least one medium readable by a data processing device and embodying at least

one result of the method of claim 31.

33. (previously presented) A data processing device comprising:

- the at least one medium according to claim 32; and

- at least one processor configured to

    - use the at least one medium to produce the XML document; and

    - perform the associating operation.

34. (original) The method of claim 22, wherein associating includes, not necessarily in the

following order:

- first associating one or more lists of data objects or formulas producing data objects with a

  DTD construct;

- second associating at least one of the lists or formulas with at least one variable name; and

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- using the variable name as a parameter in at least one other formula.

35. (original) At least one medium readable by a data processing device and embodying at least

one result of the method of claim 34.

36. (previously presented) A data processing device comprising:

-    the at least one medium according to claim 35; and

-    at least one processor configured to

    -    use the at least one medium to produce the XML document; and

    -    perform the associating operation and included operations.

37. (original) The method of claim 1, further comprising executing the following operation in the

data processing device: associating at least one respective environment with a respective XML

element to be generated.

38. (original) At least one medium readable by a data processing device and embodying at least

one result of the method of claim 37.

39. (previously presented) A data processing device comprising:

-    the at least one medium according to claim 38; and

-    at least one processor configured to

    -    use the at least one medium to produce the XML document; and

    -    perform the associating operation.

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40. (original) The method of claim 37, wherein the at least one environment comprises

• information from a parent XML element of the respective XML element; and

• information from a binding specification of a DTD construct associated with the respective
   XML element.

41. (original) At least one medium readable by a data processing device and embodying at least
   one result of the method of claim 40.

42. (previously presented) A data processing device comprising:

- the at least one medium according to claim 41; and

- at least one processor configured to

   - use the at least one medium to produce the XML document; and

   - perform the associating operation.

43. (previously presented) The method of claim 37, wherein

• the mapping includes at least one respective specification corresponding to at least one
   respective XML element;

• the specification comprises at least one parameter for receiving a value upon generation of
   the XML document; and

• the method further comprises, upon generation of the XML document, sending the at least
   one parameter a value according to at least one variable/value pair in the at least one
   respective environment.

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44. (original) At least one medium readable by a data processing device and embodying at least

one result of the method of claim 43.

45. (previously presented) A data processing device comprising:

-       the at least one medium according to claim 44; and

-       at least one processor configured to

-       use the at least one medium to produce the XML document; and

-       perform the associating and sending operations.

46. (previously presented) At least one medium readable by at least one data processing device

and embodying software adapted to perform operations comprising:

•   using a pre-established DTD corresponding to the desired XML; and

•   based on the DTD and a plurality of data sources, adding annotations to the DTD to create an

annotated DTD, such that an XML document generated from the annotated DTD is

guaranteed to conform to the DTD.

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47. (canceled)

48. (original) The at least one medium of claim 46, wherein the data source is a relational

database.

49. (withdrawn)

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50. (canceled)

51 - 52 (withdrawn)

53. (previously presented) The at least one medium of claim 46, wherein the operations further comprise associating values and or formulas with the DTD.

54. (previously presented) The at least one medium of claim 53, wherein the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct having a repetition symbol at the end.

55. (original) The at least one medium of claim 54, wherein the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct which is not a #PCDATA, a choice list, or an attribute list, and does not end with a repetition symbol.

56. (original) The at least one medium of claim 54, wherein associating includes associating a value or formula producing a value with each PCDATA, choice list, or attribute definition.

57. (original) The at least one medium of claim 54, wherein associating includes, not necessarily in the following order:

• first associating one or more lists of data objects or formulas producing data objects with a DTD construct;

• second associating at least one of the lists or formulas with at least one variable name; and

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- using the variable name as a parameter in at least one other formula.

58. (original) The at least one medium of claim 46, wherein the operations further comprise associating at least one respective environment with a respective XML element to be generated.

59. (original) The at least one medium of claim 58, wherein the at least one environment comprises

- information from a parent XML element of the respective XML element; and

- information from a binding specification of a DTD construct associated with the respective XML element.

60. (previously presented) The at least one medium of claim 58, wherein

- the mapping includes at least one respective specification corresponding to at least one respective XML element;

- the specification comprises at least one parameter for receiving a value upon generation of the XML document; and

- the method further comprises, upon generation of the XML document, sending the at least one parameter a value according to at least one variable/value pair in the at least one respective environment.

61. (previously presented) At least one data processing device comprising:

- means for receiving data from at least one data source;

- at least one processor adapted to perform operations comprising:

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- using a pre-established DTD corresponding to the desired XML; and

- based on the DTD and a plurality of data sources, adding annotations to the DTD to create an annotated DTD, such that an XML document generated from the annotated DTD is guaranteed to conform to the DTD.

62. (canceled)

63. (currently amended) The at least data processing device of claim 6̶1̶2̶, wherein

- the at least one data source comprises at least two data sources, and the data sources are of different types; and

- the data source is a relational database.

64. (withdrawn)

65. (canceled)

66-67 (withdrawn)

68. (previously presented) The at least one data processing device of claim 61, wherein the operations further comprise associating values and or formulas with the DTD.

69. (original) The at least one data processing device of claim 68, wherein the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct having a repetition symbol at the end.

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70. (original) The at least one data processing device of claim 68, wherein the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct which is not a #PCDATA, a choice list, or an attribute list, and does not end with a repetition symbol.

71. (original) The at least one data processing device of claim 68, wherein the associating includes associating a value or formula producing a value with each PCDATA, choice list, or attribute definition.

72. (original) The at least one data processing device of claim 68, wherein the associating includes, not necessarily in the following order:

* first associating one or more lists of data objects or formulas producing data objects with a DTD construct;

* second associating at least one of the lists or formulas with at least one variable name; and

* using the variable name as a parameter in at least one other formula.

73. (original) The at least one data processing device of claim 61, wherein the operations further comprise associating at least one respective environment with a respective XML element to be generated.

74. (original) The at least one data processing device of claim 73, wherein the at least one environment comprises

* information from a parent XML element of the respective XML element; and

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* information from a binding specification of a DTD construct associated with the respective XML element.

75. (previously presented) The at least one data processing device of claim 73, wherein

* the mapping includes at least one respective specification corresponding to at least one respective XML element;

* the specification comprises at least one parameter for receiving a value upon generation of the XML document; and

    * the method further comprises, upon generation of an XML document, sending the at least one parameter a value according to at least one variable/value pair in the at least one respective environment

76. (previously presented) The method of claim 1, wherein the pre-established DTD corresponds to multiple heterogeneous data sources.

77. (previously presented) At least one medium readable by a data processing device and embodying at least one result of the method of claim 76.

78. (previously presented) A data processing device comprising:

* the at least one medium according to claim 77; and

* at least one processor configured to use the at least one medium to produce the XML document based on the mapping.

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79. (previously presented) The medium of claim 46, wherein the pre-established DTD corresponds to multiple heterogeneous data sources.

80. (previously presented) The data processing device of claim 61, wherein the pre-established DTD corresponds to multiple heterogeneous data sources.

81. (previously presented) The method of claim 1, wherein the mapping returns at least one scalar value, at least one list of scalar values, and at least one SQL call result.

82. (previously presented) The medium of claim 46, wherein the mapping returns at least one scalar value, at least one list of scalar values, and at least one SQL call result.

83. (previously presented) The data processing device of claim 61, wherein the mapping returns at least one scalar value, at least one list of scalar values, and at least one SQL call result.

84. (previously presented) The method of claim 1, wherein the mapping is responsive to a user mapping specification.

85. (previously presented) The medium of claim 46, wherein the mapping is responsive to a user mapping specification.

86. (previously presented) The data processing device of claim 61, wherein the mapping is responsive to a user mapping specification.

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